What is claimed is:

1. A non-aqueous electrolyte secondary battery comprising a positive pole, a negative pole, an electrolyte liquid constituted of a non-aqueous solvent and a supporting salt, a separating for separating said positive and said negative pole, and a gasket, wherein a surface of at least either of an active material of said positive pole and an active material of said negative pole is coated with an oil repellent material.

2. A non-aqueous electrolyte secondary battery according to claim 1, wherein said oil repellent material is powder.

3. A non-aqueous electrolyte secondary battery according to claim 1, wherein said oil repellent material is a fluorinated resin.

4. A non-aqueous electrolyte secondary battery according to claim 1, wherein said oil repellent material is an oil repellent conductive agent.

5. A non-aqueous electrolyte secondary battery according to claim 1, wherein said positive pole active material is a lithium-containing manganese oxide.

6. A non-aqueous electrolyte secondary battery according to claim 5, wherein said lithium-containing manganese oxide is $Li_4Mn_5O_{12}$.

7. A non-aqueous electrolyte secondary battery

according to claim 1, wherein said negative pole active material is at least an active material selected from SiO, Si, WO_2, WO_3 and a Li-Al alloy.

8. A non-aqueous electrolyte secondary battery according to claim 1, wherein said non-aqueous solvent has a boiling point of 200°C or higher at the atmospheric pressure, said supporting salt contains fluorine, said separator is formed by glass fibers or by a resin with a thermal deformation temperature of 230°C or higher, and said gasket is formed by a resin with a thermal deformation temperature of 230°C or higher.

9. A non-aqueous electrolyte secondary battery according to claim 8, wherein said non-aqueous solvent having a boiling point of 200°C or higher at the atmospheric pressure is a single compound or composite compounds selected from ethylene carbonate (EC) and γ-butyrolactone (γ-BL), said supporting salt is a single compound or composite compounds selected from lithium hexafluorophosphate ($LiPF_6$) and lithium borofluoride ($LiBF_4$), and a resin constituting said gasket is polyphenylene sulfide (PPS), liquid crystal polymer (LCP), polyether ether ketone resin (PEEK), polyether nitrile resin (PEN), or tetrafluoroethylene-perfluoroalkyl vinyl ether copolymer resin (PFA).